

CLAIMS

1. A spring element, in particular a spring rail for wipers, made from a ferritic chromium steel, consisting of
0.03 to 0.12% of carbon
0.2 to 0.9% of silicon
0.3 to 1% of manganese
13 to 20% of chromium
less than 0.5% of nickel
0.1 to 2% of molybdenum
0.05 to 1.0% of copper
0.02 to 0.5% of nitrogen
less than 0.01% of titanium
0.01 to 0.10% of niobium
0.02 to 0.25% of vanadium, remainder iron.
2. The spring element as claimed in claim 1, characterized in that the steel contains at most 0.1% of carbon, at most 1.5% of molybdenum, 0.1 to 0.5% of copper and at least 0.03% of nitrogen.
3. The spring element as claimed in claim 1, characterized by a carbon content of from 0.06 to 0.1%, a chromium content of from 15 to 18% and a molybdenum content of from 0.8 to 1.5%.
4. The spring element as claimed in one of claims 1 to 3, characterized by a coercive force of from 190 to 320 A/cm and a magnetic saturation of from 1.45 to 1.75 T.
5. The spring element as claimed in one of claims 1 to 4, characterized by a thermosetting powder coating.
6. The spring element as claimed in claim 5, characterized by a layer thickness of from 0.05 to 0.15 mm.

7. The spring element as claimed in one of claims 1 to 6, characterized by solution annealing for from 0.5 to 60 min at 900 to 1100°C.
8. The spring element as claimed in claim 7, characterized by cold-forming with a degree of deformation of over 65%.
9. The spring element as claimed in claim 8, characterized by tempering after the cold-forming for from 0.1 to 1 min at 200 to 380°C.
10. The spring element as claimed in claim 9, characterized by a coating hardening temperature which is in the region of the tempering temperature.